Proposed Item for Biobased Designation

The following biobased product information has been collected to support item designation by USDA for the Federal Biobased Product Preferred Procurement Program (FB4P). This summary reflects data available as of July 26, 2006. Additional biobased content information added on March 28, 2007.

Title: Hand Cleaners/Sanitizers

Description: Soaps and detergents used for sanitizing, cleaning, moisturizing, and conditioning hands with or without use of water.

Manufacturers Identified: 36 manufacturers producing Hand Cleaners/Sanitizers have been identified through internet searches, manufacturer's directories, trade associations, and company submissions.

Industry Associations Investigated: The following industry associations have been investigated for member companies producing Hand Cleaners/Sanitizers:

- National Association of Professional Cleaners
- Hospitals for a Healthy Environment
- Biobased Manufacturers Association
- United Soybean Board
- National Corn Growers Association
- Federal Emergency Management Agency
- Centers for Disease Control and Prevention
- National Consumers League
- National Association of School Nurses
- Hand Hygiene Resourse Center

Commercially Available Products Identified: Of the manufacturers identified, 73 Hand Cleaners/Sanitizers are commercially available on the market.

Product Information Collected: Specific product information including company contact, intended use, biobased content, and performance characteristics have been collected on 21 Hand Cleaners/Sanitizers.

Industry Performance Standards: Product information submitted by biobased manufacturers indicate that have typically been tested to the following industry standards:

- American Type Culture Collection #11229 Organism: Escherichia coli (Migula) Castellani and Chalmers
- American Type Culture Collection #6539 Organism: Salmonella enterica subsp. enterica (ex Kauffmann and Edwards) Le Minor and Popoff serovar Typhi; deposited as Salmonella typhi (Schroeter) Warren and Scott

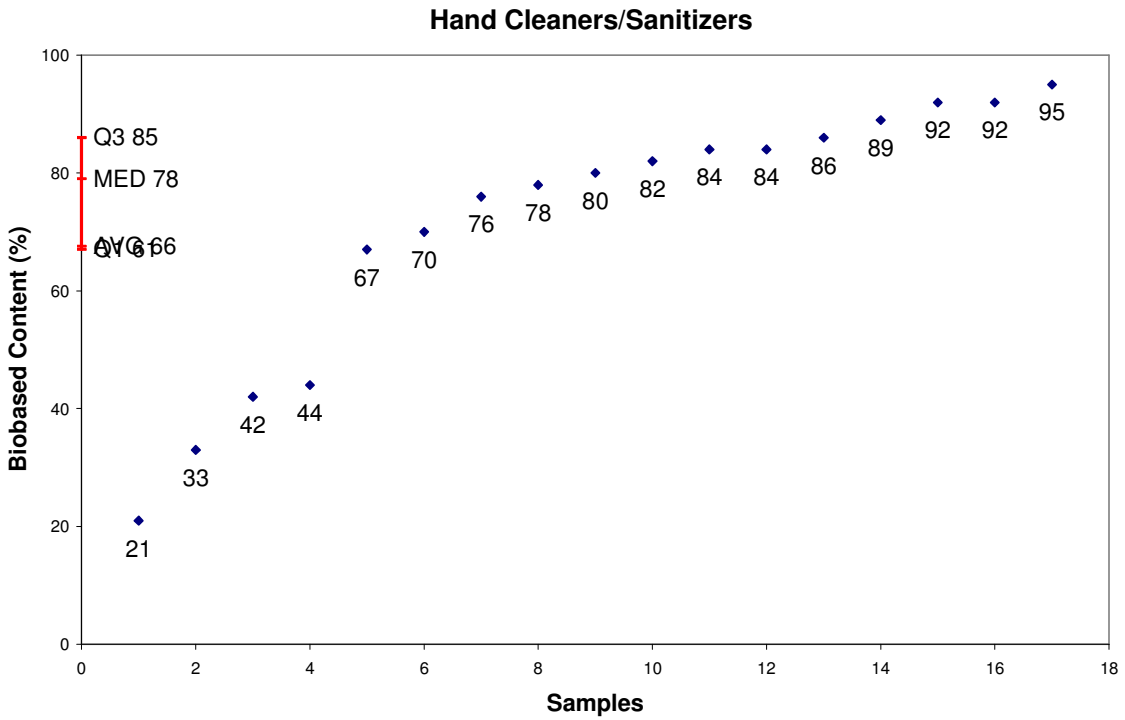
Samples Tested for Biobased Content: 17 samples of Hand Cleaners/Sanitizers have been submitted to independent laboratories for biobased content testing as specified by ASTM standard D6866-04.

Biobased Content Data: Results from biobased content testing of Hand Cleaners/Sanitizers indicate a range of content percentages from 21% minimum to 95% maximum biobased content as defined by ASTM D 6866-04. A detailed distribution of biobased content levels is included as Appendix A.

Products Submitted for BEES Analysis: Life-cycle cost and environmental effect data for 3 Hand Cleaners/Sanitizers have been submitted to NIST for BEES analysis.

BEES Analysis: The life-cycle costs of the submitted Hand Cleaners/Sanitizers range from $17.02 minimum to $21.24 maximum per usage unit. The environmental scores range from 0.0227 minimum to 0.0412 maximum. A detailed summary of the BEES results is included as Appendix B.

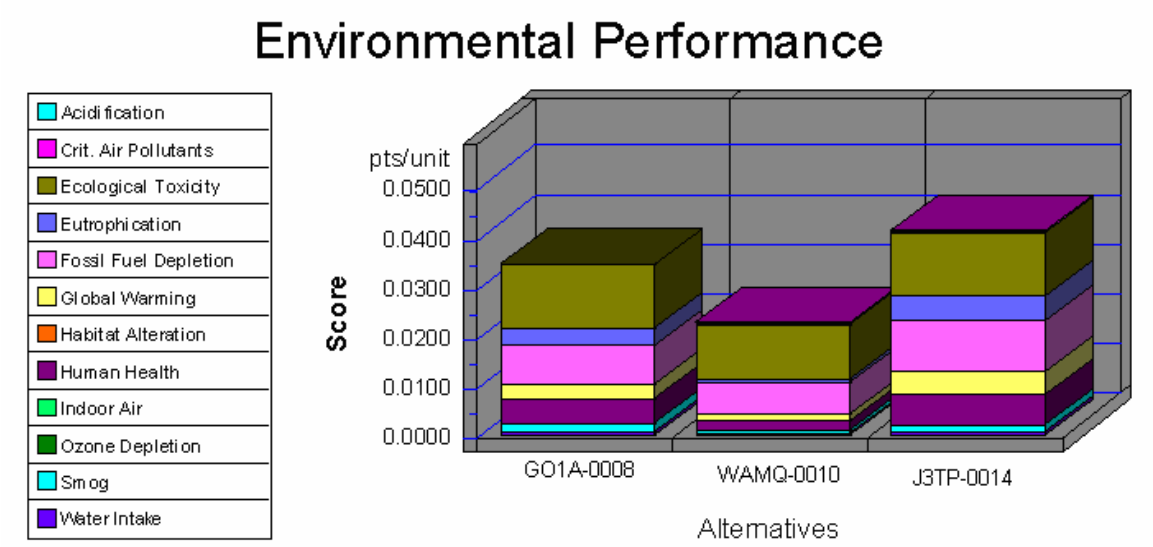
Appendix A - Biobased Content Data



	Manufacturers Identified	Products Identified	C14	BEES
1	WAMQ	WAMQ-0011	21	
2	C9PX	C9PX-0016	33	
3	WAMQ	WAMQ-0012	42	
4	GO1A	GO1A-0009	44	
5	GO1A	GO1A-0002	67	
6	GO1A	GO1A-0003	70	
7	GO1A	GO1A-0001	76	
8	RDO8	RDO8-0033	78	
9	GO1A	GO1A-0010	80	
10	GO1A	GO1A-0004	82	
11	W64A	W64A-0001	84	
12	RDO8	RDO8-0035	84	
13	WAMQ	WAMQ-0010	86	yes
14	GO1A	GO1A-0007	89	
15	J3TP	J3TP-0014	92	yes
16	J3TP	J3TP-0032	92	
17	GO1A	GO1A-0008	95	yes

Appendix B - BEES Analysis Results

Functional Unit: One gallon

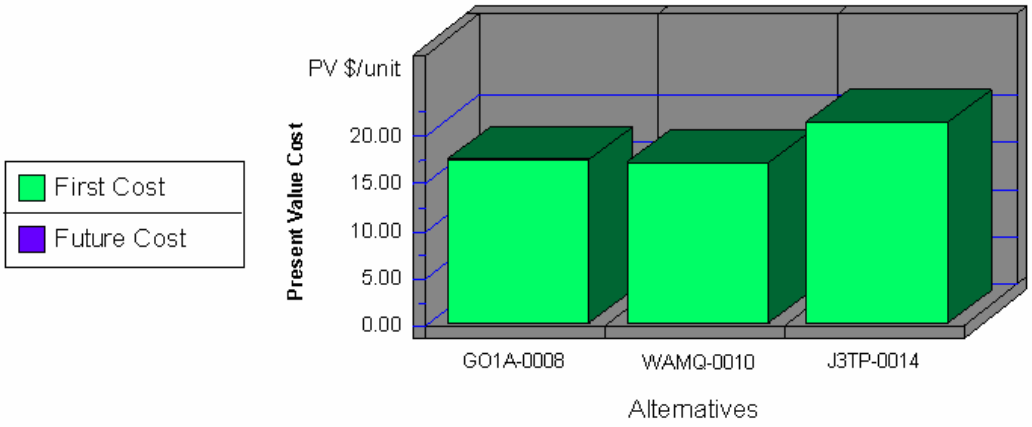


Note: Lower values are better

Category	GO1A-0008	WAMQ-0010	J3TP-0014
Acidification–5%	0.0000	0.0000	0.0000
Crit. Air Pollutants–6%	0.0002	0.0001	0.0004
Ecolog. Toxicity–11%	0.0128	0.0112	0.0125
Eutrophication–5%	0.0034	0.0007	0.0052
Fossil Fuel Depl.–5%	0.0077	0.0063	0.0102
Global Warming–16%	0.0028	0.0015	0.0047
Habitat Alteration–16%	0.0000	0.0000	0.0000
Human Health–11%	0.0053	0.0017	0.0058
Indoor Air–11%	0.0000	0.0000	0.0000
Ozone Depletion–5%	0.0000	0.0000	0.0000
Smog–6%	0.0015	0.0008	0.0014
Water Intake–3%	0.0010	0.0004	0.0010
Sum	0.0347	0.0227	0.0412

Appendix B (continued)

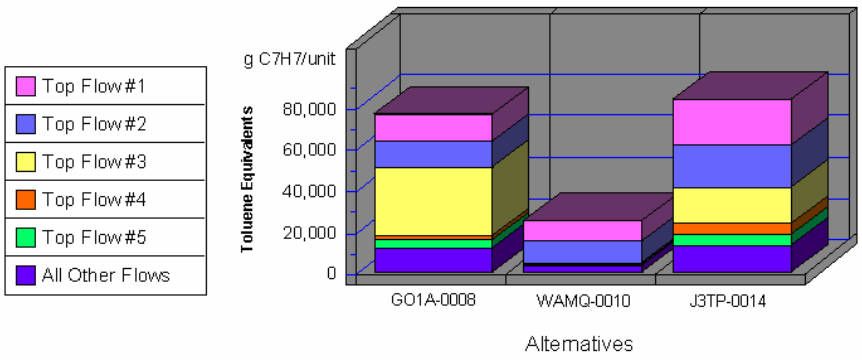
Economic Performance



Category	GO1A-0008	WAMQ-0010	J3TP-0014
First Cost	17.30	17.02	21.24
Future Cost– 3.9%	0.00	0.00	0.00
Sum	17.30	17.02	21.24

*No significant/quantifiable performance or durability differences were identified among competing alternatives. Therefore, future costs were not calculated.

Human Health by Sorted Flows*



Note: Lower values are better

Category	GO1A-0008	WAMQ-0010	J3TP-0014
Cancer--(w) Arsenic (As3+, As5+	13,613.46	9,982.06	21,685.16
Cancer–(w) Phenol (C6H5OH)	12,267.54	10,343.22	20,365.72
Cancer–(a) Atrazine (C8H14ClN5	33,127.00	0.00	17,534.10
Noncancer–(a) Mercury (Hg)	1,619.36	348.52	5,372.19
Cancer–(a) Arsenic (As)	4,448.74	734.46	5,337.09
All Others	11,742.07	3,592.04	13,183.40
Sum	76,818.17	25,000.30	83,477.66

*Sorted by five topmost flows for worst-scoring product